UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,021	06/21/2006	William T. Townsend	BARRETT-47798-60481 PCTUS	4814

27300 7590 08/23/2011

PANDISCIO & PANDISCIO, P.C.
470 TOTTEN POND ROAD
WALTHAM, MA 02451-1914

EXAMINER	
HSIAO, JAMES K	

ART UNIT	PAPER NUMBER
3657	

MAIL DATE	DELIVERY MODE
08/23/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/584,021	TOWNSEND, WILLIAM T.
	Examiner	Art Unit
	JAMES HSIAO	3657

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 September 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *6-13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5, 14-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/9/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what is being set, or how it is being set? Is this a method claim? In addition, there is no language in claim 1 regarding "setting".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 4, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Townsend (5388480).

Regarding claim 1, Townsend discloses a tension element drive (fig 1) powered by an electric motor (14) with a rotary output (18); an initiation mechanism (52) that selectively couples the torque output shaft to the pretension element (20) (Col. 4, lines 1-24).

Regarding claim 3, Townsend discloses wherein the selective coupler is semi automatic (col. 3, lines 20-28).

Regarding claim 4, Townsend discloses The where said selective initiation mechanism comprises a sleeve (20) that extends axially over one axially extending section of the output shaft (fig 1) and is operatively coupled for rotation with the shaft in only one direction (col. 3, lines 35-36), and a mechanical device (52) that selectively blocks any rotation of the sleeve with respect to the shaft , and wherein the tension element is wound in one sense on said shaft and in the opposite sense on said sleeve (col. 2, lines 44-63), whereby, when the mechanical device is selectively activated (col. 2, lines 17-19), the motor overcomes the previous pretension and rotates the shaft relative to the sleeve in the direction that increases pretension (col. 2, lines 44-63).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend (5388480).

Regarding claim 2, Townsend does not disclose a fully automatic apparatus. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the selective initiation mechanism automatic, since it is held that broadly

providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192

7. Claims 5, 14-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend (5388480) in view of Midorikawa (6332629).

Regarding claim 5, Townsend discloses as set forth above but lacks a solenoid. Midorikawa teaches a solenoid actuator the actuates lever 112d in order to lock rotation of an element.

Regarding claims 14 and 15, Townsend lacks a controller for the motor. Midorikawa teaches a controller (200A) connected to the motor (110).

Regarding claims 16, 19, Townsend lacks an encoder and prosessor for monitoring tension. Midorikawa teaches controller 200B for monitoring tension (111)

Regarding claim 17, the apparatus of Townsend exhibits a capstan effect. It has been held that a recitation with respect to the manner in which the apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the pretensioner of Townsend with the electronic control of Mikorikawa because an electronic automatic control rids the need for a human operated apparatus thus cutting operating costs.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend (5388480) in view of Midorikawa (6332629) and in further view of Segrave (33247119).

Regarding claim 20, Townsend and Midorikawa lack a strain gauge. Segrave teaches the use of a strain gauge (4) to measure the strain on a cable (1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the above combination with the strain gauge of Segrave because a strain gauge measures the force applied to the cable and provides a value in a means of safe operation.

9. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend (5388480) in view of Vilim et al. (5745382).

Regarding claims 21-23, Townsend lacks a neural network processor. Vilim et al. teaches wherein a processor operatively connected runs neural network algorithms to leanrn and adapt operating conditions (Vilim abstract).

It has been held that a recitation with respect to the manner in which the apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the pretensioner of Townsend with the neural network of Vilim because an automated system that learns and follows patterns of learning will provide an efficiently run apparatus and thus cut operating cost.

Response to Arguments

10. Applicant's arguments filed 9/10/2010 have been fully considered but they are not persuasive.

Applicant traverses the rejection of claim 18 under 35 USC 112. After further consideration examiner maintains the rejection of record for the following reason. Claim 18 requires a pretension to be "set". However, claim 1 does not recite a positive step with regards to setting. The language in claim 18 that requires a setting of pretension implies that claim 1 might be a method claim, but it appears to not be a method claim. It appears to be an apparatus, as recited in line 1 of claim 1. Therefore it is unclear what is being set, when it is being set, or how it is being set. It appears that the claim language of both claims 18 and 1 are more specific than the arguments presented by the applicant.

Applicant traverses the rejection of claims 1,3,4, and 18 under USC 102 (b). After further consideration examiner maintains the rejection of record for the following reasons. Applicant argues that the reference Townsend does not disclose selectively coupling the output shaft of the drive motor with an initiation mechanism. At the outset, examiner notes that the claim language does not actually require this action. The claim language requires the "initiation mechanism to selectively couple the *torque* of the output shaft". Given the broad nature of the claim limitation, examiner maintains the position that the reference does perform such an action. As broadly recited and given the broadest reasonable interpretation of Townsend, Townsend does selectively couple

both the torque of the output shaft and the output shaft itself, through pretensioning mechanism (10). As recited in column 4, lines 1-24, Worm 52 is disposed in bore 56 in pinion sleeve 20. Threads on worm 52 *engage* with threads 60 on the reduced shoulder 32 of the *pinion shaft 18*. The selective nature of the pretension comes in the form of a manual adjustment using an allen wrench. The claim language does not require a source of selection and does not specify what the initiation mechanism is. Townsend also discloses that when it is desired to adjust the pretension on the tension elements, it is simply necessary in a single action to rotate with a torque wrench the worm, which both adjusts and holds the tension. The worm drive both relatively counter-rotates the pinion shaft and pinion sleeve relative to one another, and *holds* them both rotationally and axially in whatever position occurs when the operator ceases further turning of the worm. Therefore the mechanism can be interpreted as "semi-automatic".

It appears that the applicant's arguments regarding the claims are much more specific than the limitations set by the claims.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES HSIAO whose telephone number is (571)272-6259. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bradley T King/
Primary Examiner, Art Unit 3657

JKH